ABSTRACT

An optical module includes a waveguide. In one aspect, an optical active element and an optical waveguide are formed separately, with the optical waveguide being optically coupled to the optical active element, and with the optical waveguide including a spot-size conversion region. In another aspect, a refractive index matching resin, having the same-level refractive index as that of the optical waveguide, is provided between the waveguide and the optical active element. In a further aspect, the waveguide is a Y-type branch waveguide in which a single-mode waveguide section is branched into first and second branch waveguide sections. In a yet another aspect, a device which divides lights of different wavelengths is provided to reflect light of a first wavelength and pass light of another wavelength, separating incoming light from outgoing light.